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Rationality and the Emotions

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In an earlier paper (Elster, 1989 *a*), I discussed the relation between rationality and social norms. Although I did mention the role of the emotions in sustaining social norms, I did not focus explicitly on the relation between rationality and the emotions. That relation is the main topic of the present paper, with social norms in a subsidiary part.

Emotions are a neglected topic, and the neglect of economists is second to none. I find this surprising. I take it that economics is concerned with the best ways of promoting human satisfaction in a world of scarce resources. With one exception, all human satisfaction comes in the form of emotional experiences. The exception is the hedonic satisfaction produced by the senses, such as the taste of sweetness on the tongue or the feeling of wind on your face after a long climb. Such sensations differ from emotions in that no prior cognition is necessary to produce them. I do not have to recognise the wind as wind to enjoy the sensation. By contrast, to get angry when my Albanian host offers me a cup of tea by passing it under his left arm I have to know that in Albania this is considered an insult. For infants, sensations may be the most important source of satisfaction. For most adults, I believe, they definitely take second place to emotional experiences. If one grants the truth of that claim, or even of the weaker claim that emotional experiences are important sources of human satisfaction, we would expect economists to have thought about them a great deal. We would expect them to have studied the ways in which people organise their life to maximize emotional satisfaction, to have identified sources of suboptimal emotion-seeking behaviour, and to have suggested ways of improving this behaviour.

Economists, as we know, have done nothing of the kind. Recent economic work on the emotions (Hirshleifer, 1987; Frank, 1988) focuses exclusively

on the role of the emotions in sustaining (or preventing) cooperative interactions. No economist to my knowledge has considered the emotions in their main role as providers of pleasure, happiness, satisfaction, or utility. To put it crudely, *economists have totally neglected the most important aspect of their subject matter*. No doubt there are reasons for this neglect. One is the lack of a metric. If you asked someone whether he prefers shame or grief - whether he would rather be caught cheating at an exam or have his girl friend leave him - he would probably be at a loss for an answer. The emotions themselves, in fact, interfere with our ability to observe them. (Montaigne cites Petrarch to the effect that 'He who can describe how his heart is ablaze is burning on a small pyre'.) Another reason - which ought, however, to be a challenge rather than an excuse - may be the lack of good theories of how emotions are triggered and transformed in encounters with the world. A further reason may be that

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emotional satisfaction is largely (but not only) derived from encounters with other people rather than from material goods and that, moreover, these are encounters not mediated by the market ('Can't buy me love'.) A final reason may be an inchoate insight that people do not usually try to maximise their good emotional experiences, and that they are likely, moreover, to fail if they try. Economists may be deterred from studying emotions simply because people do not seem to manage their emotional life very rationally. (Note that this is not the same as to say that emotions make people behave irrationally.)

I shall now proceed as follows. First, I lay down what for the purposes of this essay I will count as emotions, and briefly discuss some of the main emotions. (For a very full discussion, see Frijda (1986).) Next, I discuss the role of emotions in sustaining social norm and the role of social norms in regulating emotions. Then, at greater length, I explore some of the interconnections between rationality and emotions. I discuss whether emotions can themselves be more or less rational; whether emotions may interfere with rationality or, on the contrary, promote it; and whether emotional life can in any meaningful sense be subject to rational planning and optimisation.

I conclude by discussing whether emotions and emotional satisfaction are topics that might lend themselves to study by economists.

I. EMOTIONS

Emotions, like beliefs and desires, can be conceived either as occurrent mental events or as dispositions for such events to occur. I shall use 'emotions' or 'occurrent emotions' for the former and 'emotional dispositions' for the latter. Whereas emotions are only to a small extent under the control of the will, dispositions can to a larger extent be consciously shaped. A succinct characterisation of the emotions might be that they are the stuff that keeps us awake at night. More soberly, they go together with physiological arousal of some sort or other. The arousal need not be very strong, and may arguably be absent altogether, as in the puzzling case of the aesthetic emotions.

Yet other things such as pain also keep us awake at night. One feature that distinguishes emotions from pain is that they are *about* something, i.e. that they have an intentional object. In that respect, too, they are like beliefs and desires. Some argue that this feature may also be absent, e.g. in so-called free-floating anxiety. Although I believe it is more useful to think of such cases as dispositions to feel anxious about a great many individual occurrences, I do not think the matter is very important. Standardly, emotions are intentional. As Hume warned us, however, we should take care not to confuse the object of an emotion with its cause: if I receive bad news in the mail, I may react by getting angry at my family.

Also unlike pain, emotions have a cognitive antecedent (but see Goleman (1995) for some exceptions). Before we can react emotionally to a situation, we have to process it cognitively. We must decide whether the person stamping on my foot on the subway did so intentionally; whether the person who got the job I covet obtained it by immoral means; whether my wife's frequent absences

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from home are really caused by her work, and so on. Often, as we shall see, the emotions have cognitive consequences as well: they may cause a reassessment of the situation that caused them in the first place.

When pain keeps us awake at night, we want it to go away. When we are kept awake by love, we do not want it to go away. In fact, when in love we may not need much sleep altogether. Unlike pain, and unlike emotions such as grief or, guilt, love is a highly desirable disposition. In the language of psychologists, it has positive valence. Other emotions such as the ones just

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and envy, relate to each other by analogy or by homology. As far as I know, nobody knows. In particular, I know of no convincing argument that all emotional dispositions exist because of their contribution to biological fitness or to social optimality.

The enumeration of these features also leaves unresolved exactly which mental states count as emotions, and whether some of them might be more fundamental than others. Although there are many clear-cut cases - love, hate, grief, anger, fear, guilt, shame, embarrassment, joy, pride, sadness, envy, jealousy, regret, hope, *Schadenfreude*, disgust, contempt - it is not clear whether surprise, worry, boredom, frustration and sexual excitement are emotions. Also, it is not clear which emotions are basic and which are compound; whether basic emotions relate to compound emotions as atoms to molecules or as pure colours to mixed colours; or indeed whether the whole distinction is meaningful. Psychologists display an amazing lack of agreement on this issue.

A final observation concerns the dynamics of the emotions. One of the main reasons why emotions matter so much in our life is because they have the capacity to create what Paul Ekman (1992) calls 'emotional wildfires'. As with Othello's jealousy, they easily get out of hand, partly, as Montaigne observed, because we may not notice them until it is too late to bring them under control. Also, when an emotion causes us to reassess the situation, a new emotion will take its place. Because the emotion of envy, for instance, is so abhorrent (a second-order emotional reaction), it may cause us to redescribe the situation so as to justify the wonderful feeling of righteous indignation. 'He has something which I covet; he probably got it in some immoral way, and at my expense.'

II. EMOTIONS AND SOCIAL NORMS

In Elster (1989*a, b*) I defined social norms as injunctions to behaviour that (i) are non-outcome-oriented, (ii) apply to others as well as to oneself, (iii) are sustained by the sanctions of others, and (iv) are sustained by internalised emotions. These are *social* by virtue of (ii) and (iii) and *norms* by virtue of (i). On the one hand, they differ from merely private rules that people can construct to regulate their behaviour, such as 'Never drink

before dinner'. On the other hand, they differ from the outcome-oriented injunctions of instrumental rationality in that the targeted action is to be performed because it is intrinsically appropriate, not because it is a means toward a desired goal. 'Always wear black dress to a funeral' is very different from 'Always wear white dress in strong sunshine'.

On this account, the internalised emotions do not appear to be a necessary part of a system of social norms. Although they may reinforce the external sanctions provided by others, they are not indispensable for the operation of norms. I now believe that this account was mistaken, or at least misleading. External sanctions range from raised eyebrows to all-and-out social ostracism and even persecution. By focusing on the latter part of the spectrum, one might easily persuade oneself that sanctions matter in the same way that prices

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matter, by raising the cost of certain behaviours. But this seems wrong. Sanctions - whether mild or severe - matter mainly because they are vehicles for the expression of feelings of anger, disgust, and contempt. For most people, being the target of these emotions is immensely unpleasant, much worse than what one suffers by mere material deprivation. There is little worse than to cringe in shame before a look of contempt or disgust in another. If the look is backed up by action, such as a refusal to invite you to the next dinner party or to give you a daughter in marriage, the target may be truly devastated - not because of the material sanction as such, but because of what it conveys about the emotional attitudes of the sanctioner. To say that shame itself is a cost would be jejune and uninformative. A person who treated his shame as a cost would in all likelihood never feel any.

Some norms are sources of massive unhappiness, by imposing behaviour that can be pointless, difficult, expensive, or dangerous. This is true of trivial norms such as rules of etiquette as well as of very consequential norms such as codes of honour and of revenge (Elster, 1990). Although socio-biologists, sociologists and economists have tried to explain these norms in terms of their fitness-enhancing effects, social usefulness or individual rationality, I do not think they have succeeded (Elster, 1989 *b*, pp. 125-51). I am not implying that the feeling or anticipation of shame, and the behaviours which they sustain, are always sources of inefficiency or even necessarily inefficient in a net sense. By casting an opprobrium on free-riding, shame can induce people to cooperate in collective-action

problems. Fear of being shamed may induce people to take care of their children and old parents. Over time, everybody may be better off as a result. The net effect of norms on social welfare depends on the baseline for comparison. Compared to universal and ruthless pursuit of self-interest, social norms sustained by shame probably makes us better off overall. Compared to a society guided by moral norms and sustained by *guilt* in the case of norms violation, regulation by shame is a very crude instrument.

As norms are sustained by emotions, emotions and their expression may be regulated by social norms. To the extent that expression of the emotions is within the control of the will, they are obvious targets for social norms. There is, for instance, an effective norm against laughing at funerals. Expressions that are largely involuntary, such as shedding tears, blushing or fainting, are usually not the target of norms. *A fortiori*, we would expect that the emotions themselves would not be norm-regulated. Surprisingly, perhaps, they are. Although the emotions are not directly accessible to others, motivated observers can often detect their presence or absence and, if need be, mete out sanctions. People may feel ashamed if they are not happy at their wedding day or sad at a funeral; if they feel inappropriate degrees of anger or pride; and even if they feel ashamed by things they do not think they should be ashamed of. In such cases, the presence or absence of an emotion in oneself triggers emotions in others and in oneself. Rather than speaking of norms regulating the emotions we might more accurately, therefore, refer to emotional control over the emotions. Above I suggested that under the pressure of second-order emotions, first-order emotions may be transmuted so as to appear in a more acceptable form. Yet this

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mechanism of dissonance-reduction or ego defence may fail. Some people go through life feeling deeply ashamed of their emotional reactions, even when they are able to refrain from acting on them.

III. RATIONALITY AND THE EMOTIONS

A standard view of rational choice theory is illustrated in Fig. 2.

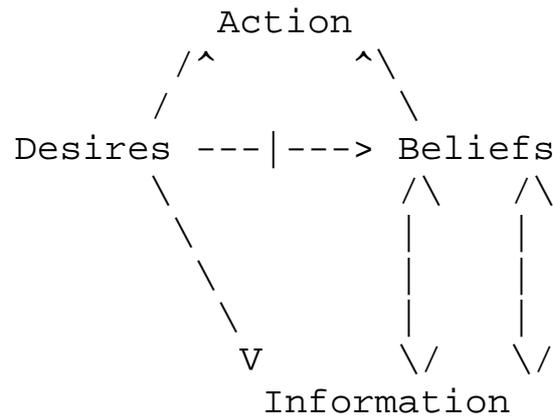


Fig. II.

An action is rational if it satisfies three optimality conditions, represented by the unblocked arrows. First, the action has to be the best means of realising the agent's desires, given his beliefs about ends-means relationships and other factual matters. Secondly, these beliefs themselves have to be optimal, given the information available to the agent. The process of belief formation, that is, must not be distorted by 'cold' mistakes in information processing or 'hot' mistakes caused by motivational biases (the blocked arrow from desires to beliefs). Thirdly the amount of information, or more accurately the amount of resources spent on acquiring information, must itself be optimal, given the agent's prior beliefs about the costs and benefits of information-acquisition and the importance of the decision to him. (For a fuller account see Ch. I of Elster (1989c).)

Emotions might fit into this scheme in a variety of ways. First, those who believe that occurrent emotions are actions would argue that they can be assessed by the three optimality conditions. Secondly, one might argue that the rationality criteria for emotions should be modelled on those we use for beliefs rather than on those we use for actions. Thirdly, one might examine whether people act rationally to acquire optimal emotional dispositions. Fourthly, one might ask whether they act rationally to maximise their positive emotional experiences. Fifthly, some argue that emotions promote rational decision-making by acting as tie-breakers in cases of indeterminacy. Sixthly, one might argue that emotions promote rational decision-making by providing information that is otherwise unavailable. Seventhly, however, one might argue more conventionally that emotions interfere negatively with belief formation, by inducing self-serving or overly optimistic beliefs. I shall examine these in turn.

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Are emotions rational? Are they the kind of entities that can be assessed as rational or irrational? A negative answer might proceed from two premises. First, emotions, being largely involuntary, are not actions. Secondly, only freely chosen actions can be assessed as rational or irrational. Each premise might be questioned. The first has been denied by authors who claim that emotions are in fact chosen rather than involuntary (Sartre, 1936; Schafer, 1976; Solomon, 1980). For these writers, occurrent emotions are actions, in the sense in which, say, mental calculations are actions. I think this theory flounders on some common-sensical objections. If we can choose our emotions, why do we not choose to be happy all the time? And why would anyone ever choose to be sad ?

The second premise would seem to be contradicted by the idea of rational belief. We form beliefs, but we do not choose them. In fact, it is widely accepted that the very idea of 'deciding to believe' is self-contradictory (Williams, 1973). Rational beliefs are those we hold for a reason, not for a motive. The question is whether one can similarly define what counts as reasons for the various emotions. I have no general answer, but in some cases at least the idea seems to make sense. Pride, for instance, is rational only if based on one's own achievements. When Fanny Price in *Mansfield Park* goes to her first ball, her aunt Lady Bertram sends her maid Mrs Chapman to help her dress, quite unnecessarily, as it turns out, because Fanny was already dressed by the time Mrs Chapman reached her room. Later, when Fanny receives an offer of marriage from Henry Crawford, Lady Bertram sees it as all her doing: 'I am sure he fell in love with you at the ball. I am sure the mischief was done that evening. You did look remarkably well. Every body said so. Sir Thomas said so. And you know you had Chapman to help you dress. I am very glad I sent Chapman to you.' She takes pride in an outcome for which she has no reason to feel proud.

To prepare the ground for the next two approaches, we may observe that emotions contribute to welfare in several ways. First, in any given encounter with the world there may arise occurrent emotions that are immediate sources of happiness and unhappiness. Secondly, emotional dispositions may shape the outcome of any such encounter. If people know that I am subject to fits of destructive anger, I will usually get my way when I deal with them. Thirdly, the dispositions tend to shape the stream of such encounters. If people know that I am irascible, they will avoid dealing with me. (A flaw in the arguments by Hirshleifer (1987) and Frank (1988) is that they insist on the second effect while ignoring the third.) Fourth, if I control my anger to prevent such effects, I incur psychological costs that

may be quite severe. Suppression of spontaneous emotional experiences and action tendencies may have a large negative impact on soma and psyche. Cancer patients who suppress their emotions have worse survival chances than others.

The idea of character planning includes, as a special case, the attempt to shape one's emotional dispositions so as to enjoy life more or, as in Buddhism or Stoicism, suffer less. We certainly try to teach our children not to cry over spilt milk and not to envy the success of others, and we might well try to

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inculcate the same dispositions in ourselves. Two questions arise: Do we know how to do it? Assuming that we do, is it worth it? Concerning the first, I am a sceptic. We certainly know that our present behaviour shapes our emotional dispositions, but less about how it does so. If I suppress behavioural manifestations of anger, will that make me feel less or more anger in the long run? The second point is a factual matter. It may not be worth while to spend ten years in Buddhist training in order to obtain the peace of mind that will enable me to get by on three hours of sleep a night (Elster 1983*a*). Or as Montaigne discovered, it does not make sense to spend one's life on overcoming the fear of death.

In any case, the search for the optimal emotional disposition cannot be seen in isolation from the search for an optimal life. If I am irascible, I might either try to change my disposition or avoid occasions on which I might get angry. More generally, a rational maximiser of positive emotions would look for an equilibrium in which his emotional dispositions are optimal given the cost of shaping them, the costs of controlling them and his expected stream of encounters with the world, while his contribution to that stream is optimal given his dispositions. Although the idea is absurd if taken literally, it offers a perspective on one's life that can be useful and liberating. But there are some snags. The element of surprise that enhances many positive emotional experiences by definition does not lend itself to planning. (I believe surprise is a multiplier of emotions rather than an emotion itself.) Also, people do not seem to be very good at anticipating the subjective impact of 'visceral' experiences (Loewenstein, 1995), including notably pain but also strong emotional experiences. Many who cheat on their exams would not have done so had they understood how horrible it is to be caught.

De Sousa (1987) argued that emotions enable us to choose among options none of which is rationally superior to the others. Recently, Damasio (1994) offers a book-length discussion of this view, based on work with patients with brain lesions. Although he speculates that 'Reduction in emotion may constitute an [...] important source of irrational behaviour'(p. 53), his work only supports the weaker conclusion that - 'The powers of reason and the experience of emotion decline together' (p. 54). In other words, he proves correlation - brain-lesioned patients are both emotionally flat and unable to make decisions - but not causation. His conjecture is that in order to make up our minds in largely indeterminate situations we use 'somatic markers' (gut feelings) that are not available to the emotionally disabled, who for that reason tend to procrastinate indefinitely. It is indeed true that often what matters is to make some decision rather than any particular decision. If Damasio's conjecture is true, the emotions do make a contribution to rationality. It does not seem, however, that they also help us to make the best decision when that matters.

Gut feelings may also help us to form rational beliefs. This conjecture rests on two premises. First, many pieces of information that we possess are not consciously acknowledged. Secondly, the cognitive basis of the emotions includes unconscious knowledge. If those premises are true, we can use our

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emotional reactions as cues to our unconscious assessment of a situation. Suppose you meet a person who makes you feel vaguely uncomfortable. Although you are unable to formulate a belief about the person that would justify that emotion, you can infer from the emotion that you must have some such belief. That belief, in turn, may serve as a premise for action in accordance with Fig. 2, e.g. for a decision not to have anything more to do with the person. The question, however, is whether such emotional reactions are always, or typically, justified by correct unconscious perceptions; or perhaps, more adequately, whether we can know it when they are. Many cognitive assessments that form the basis of an emotion are themselves shaped by an emotion, as when I form an dislike of a person because I have offended him (La Bruyère, *Les Caractères* IV.68). In such cases, we should not take the presence of an emotion as a reliable guide to a reliable belief. But can we tell which cases those are?

The standard view of the relation between rationality and emotion is, of course, that emotions interfere with rationality. They are, as it were, sand in the machinery of action. Nobody would deny that this is often true. Yet the

relevance of this observation is somewhat reduced by the work on 'depressive realism' which shows that cognitive accuracy is often achieved at the expense of emotional well-being (Alloy and Abrahamson, 1988). In experiments designed to test the subjects' understanding of their control in situations with imperfect correlation between their responses and an observable outcome, non-depressives exhibit an 'illusion of control' whereas depressed subjects judge their degree of control accurately. Moreover, non-depressives show an 'illusion of no control' when the outcome is associated with failure. Moreover, depressed subjects accurately assess their chances in dice-rolling experiments, whereas the non-depressed tend to overestimate their chances. Depressed subjects tend to be more evenhanded in their causal attribution of credit and blame, whereas nondepressives typically attribute negative events to others and positive events to their own intervention. Non-depressive subjects see themselves more positively than they do others with the same objective characteristics, whereas the depressed are not subject to this self-serving bias, nor to the opposite, self-deprecating bias. Depressed subjects have an accurate idea of how other people perceive them, whereas non-depressives exaggerate the good impressions they make on others.

What the literature on depressive realism shows is that the emotional ground state in which one is neither elated nor depressed is not the cognitive ground state in which one is free of self-serving or self-deprecating bias. To be sure, if people are emotionally excited, they often get things wrong, but this is only a sufficient condition, not a necessary one. To get it right, one has to sink into depression. Of course, the depressed are not very motivated to do anything. The reason why there is no sand in their machinery of action is that the engine is idling. Whenever there is a motivation to act, to get on with the business of living, we find sand in the machinery, but that is not the fault of the emotions.

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IV. IMPLICATIONS FOR ECONOMICS

Could economists contribute anything to the study of emotions, over and above what psychologists, physiologists and evolutionary biologists are already doing?

The work of Kolm (1983, 1986) shows that the tools of mathematical economics is capable of generating non-obvious and non-trivial insights into the nature of character planning and life planning. In these writings he analyses Buddhism as a theory of how to maximise utility (or minimise suffering) under constraints that are internal to the agent rather than external. He discusses, for instance, the optimal allocation of time among various activities, such as meditation (character modification), working in order to consume, and consumption itself. Along somewhat similar lines, Scitovsky (1992) analyses the temporal pattern of consumption among American consumers and suggest ways of modifyirig consumption behaviour so as to increase the overall pleasure derived from a given income. He advocates, for instance, an alternation between fasting and feasting rather than a constant schedule of food-intake.

Yet these works are mainly about hedonic experiences and only marginally about emotional life. We might expect to move closer to the study of emotions proper when we look at economic studies of interpersonal emotions such as altruism and envy, but these notions are always rendered simply as externalities in the utility function. What is lacking from these accounts, is arousal or viscerality on the one hand, and spontaneous action tendencies on the other. The work of Hirshleifer and Frank, mentioned above, does pay attention to these features. Their basic argument is that because emotional reactions tend to disregard consequences, they can have good consequences in strategic interactions. Yet, as I said, they neglect the fact that people may prefer to shy away from those who display this tendency and thus reduce the number of beneficial transactions to which the latter have access.

A fruitful question may be to study how people choose among various responses to emotional distress, and notably whether they respond rationally to the costs and benefits, their temporal distribution, and the certainty with which they will be produced. First, they may take a pill or a drink. There is a short- term benefit in the form of alleviation of the distress, and longer-term, more conjectural costs in the form of addiction and a flattened emotional life. Secondly, they may try to control themselves - not the emotion, but its expression and the associated action tendency. There is a short-term benefit in avoiding interpersonal conflict, and a more conjectural long-term cost in the heightening of intrapersonal conflicts, with possible somatic risks. Thirdly, they may try to modify their emotional dispositions. In the short term they incur the direct expenditures and opportunity costs of therapy, meditation and the like, while there is a more

conjectural long-term benefit in the form of a permanent alleviation of distress. Finally, they may change their life style, by moving from the city to the countryside or forswearing certain social occasions. There is a permanent cost in the form of an impoverished life, and a more conjectural

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permanent benefit in the form of emotional tranquillity. The choice among these options may be amenable to economic analysis - or not.

On the brighter side of things, we may ask whether people can and do shape their character or their life to enhance positive emotional gratification. With regard to life planning, we quickly run into some limits. As mentioned, people cannot plan the surprise that will enhance their emotions. I cannot make myself laugh by telling a joke to myself or tickling myself. In the wonderful phrase of George Ainslie (1992, p. 258), self-stimulation suffers from a shortage of scarcity. Also, certain emotional satisfactions can arise only as by-products of activities that are undertaken for other ends (Elster, 1983*b*). I may feel proud of my achievements, but I will not achieve much if I am moved only by the desire to feel pride. And you cannot buy love.

With regard to character planning, there are also limits. The deliberate cultivation of positive emotions is constrained by the fact that emotional reactions tend to be coupled to one another. It would be fine if we could enjoy hope without being disappointed when the hoped-for event fails to occur, but we cannot. It would be fine if we could love without grieving when we lose the person we love, but we cannot. It does *not* seem true, however, that an enhanced ability to appreciate the good things in life goes together with an enhanced vulnerability to setbacks; or that an enhanced endurance of suffering goes together with a blunting of the *joie de vivre*; or that a greater ability to love goes together with an increased susceptibility to hatred. Couplings occur among occurrent emotions, not among emotional dispositions, or so it seems. Cultivating a positive (welfare-enhancing) disposition may cause us to have occurrent negative emotions that we would not otherwise have had, but does not cause negative dispositions.

A related question arises with regard to the fine-tuning of shame. I argued earlier that social norms and the shame reactions sustaining them have both welfare-enhancing and welfare-reducing effects. The question is, therefore, whether a person can modify his character to escape the pointless suffering

caused by the grip on his mind of purely conventional norms without also becoming insensitive to social pressures to behave in a cooperative and polite way. It is clear enough that many people, when they liberate themselves from pointless conventions, go the whole way or at least too far. What happens in such cases, I believe, is a liberation from all social norms (and shame) without the emergence of moral norms (and guilt) to take their place as a constraint on self-interest. A selective liberation from social norms may be difficult.

I do not know whether economists can make direct contributions to the study of these constraints on life planning and character planning. I feel more confident in asserting that psychologists could benefit from the economist's approach to choice. Yet, to repeat, it should be a paradox and a challenge to economists that they neglect what on one definition of their subject matter is the most central issue confronting them.

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